CLAIMS:

1. A method of driving an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the method comprising:

receiving image data for display, said image data defining an image matrix;

factorising said image matrix into a product of at least first and second factor matrices, said first factor matrix defining row drive signals for said display, said second factor matrix defining column drive signals for said display; and

driving said display row and column electrodes using said row and column drive signals respectively defined by said first and second factor matrices.

2. A method as claimed in claim 1 wherein said driving comprises driving a plurality of said row electrodes in combination with a plurality of said column electrodes.

3. A method as claimed in claim 1 or 2 wherein said driving comprises driving said display with successive sets of said row and column signals to build up a display image, each said set of signals defining a subframe of said display image, said subframes combining to define said display image.

4. A method as claimed in claim 3 wherein a number of said subframes is no greater than the smaller of a number of said row electrodes and a number of said column electrodes.

5. A method as claimed in claim 4 wherein said number of subframes is less than the smaller of a number of said row electrodes and a number of said column electrodes.

6. A method as claimed in any one of claims 3 to 5 wherein said first factor matrix has dimensions determined by a number of said row electrodes and a number of said subframes, and wherein said second factor matrix has dimensions determined by a number of said column electrodes and said number of subframes.

7. A method as claimed in any preceding claim wherein said first and second factor matrices are configured such that a peak pixel brightness of said display is reduced compared with a row-by-row driving of said display using said image data.

8. A method as claimed in any one of claims 1 to 7 wherein said factorising comprises singular value decomposition (SVD) into three factor matrices, said first and second factor matrices and a third factor matrix, said third factor matrix being substantially diagonal, and wherein said row drive signals are defined by a combination of said first and third factor matrices and said column drive signals are defined by a combination of said second and third factor matrices.

9. A method as claimed in claim 8 further comprising selectively driving said display dependent upon diagonal values of said third factor matrix.

10. A method as claimed in claim 9 wherein said selective driving comprises omitting to drive said display with row and column drive signals defined by diagonal values of said third factor matrix less than a threshold value.

11. A method as claimed in claim 8, 9 or 10 when dependent upon claim 3 further comprising sorting said factor matrices such that said successive subframes are arranged to give the general appearance of a scanned display.

12. A method as claimed in any one of claims 1 to 7 wherein said factorising comprises QR decomposition.

13. A method as claimed in any one of claims 1 to 7 wherein said factorising comprises LU decomposition.

14. A method as claimed in any one of claim 1 to 7 wherein said factorising comprises non-negative matrix factorisation (NMF).

15. A method as claimed in claim 14 wherein said image matrix comprises an m x n matrix **I** and said first and second factor matrices respectively comprise an m x p matrix **W** and a p x n matrix **H** where p is less than or equal to the smallest of n x m and where $\mathbf{I} \approx \mathbf{W}.\mathbf{H}$.

16. A method as claimed in any preceding claim wheren said display comprises a multicolour display, each said pixel of which comprises subpixels of at least a green colour and a second colour, wherein said image data includes colour data defining green and second colour channels for driving said green and second colour subpixels, and wherein said image matrix factorising includes weighting said green colour channel with a greater weight than said second colour channel such that said green channel is displayed on average more accurately than said second colour channel.

17. A method as claimed in claim 16 further comprising scaling said colour data for said green and second colour channels by respective first and second weights prior to said factorisation, and wherein said second weight is less than said first weight.

18. A method as claimed in claim 16 or 17 wherein said second colour is red and wherein each said pixel further comprises a blue subpixel; wherein said colour data includes data for a blue colour channel; and wherein said factorising includes weighting said green colour channel with a greater weight than said red and blue colour channels.

19. A method as claimed in any one claims 1 to 18 wherein said display comprises an LCD display.

20. A method as claimed in any one of claims 1 to 18 wherein said display comprises an organic light emitting diode display.

21. Processor control code to, when running, implement the method of any preceding claim.

22. A carrier carrying the processor control code of claim 21.

23. A driver for an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the driver comprising;

an input for receiving image data for display, said image data defining an image matrix;

a system for factorising said image matrix into a product of at least first and second factor matrices, said first factor matrix defining row drive signals for said display, said second factor matrix defining column drive signals for said display; and

output means to output said row and column drive signals respectively defined by said first and second factor matrices.

24. A method of driving an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the method comprising:

receiving image data for display;

formatting said image data into a plurality of subframes, each said subframe comprising data for driving a plurality of said row electrodes simultaneously with a plurality of said column electrodes; and

driving said row and column electrodes with said subframe data.

25. A method as claimed in claim 24 wherein said formatting comprises compressing said image data into said plurality of subframes.

26. A method as claimed in claim 25 wheren said display comprises a multicolour display, wheren said image data comprises colour image data, and wherein said compressing comprises compressing data for a green colour channel of said display less than data for at least one of a red and a blue colour channel of said display.

27. A method as claimed in any one of claim 24, 25 or 26 wherein said formatting is configured to generate subframe data such that data from more than one said subframe drives a said pixel of said display, whereby more than one said subframe contributes to an apparent brightness of pixels of the display.

28. A method as claimed in claim 24, 25, 26 or 27 wherein said compressing comprises singular value decomposition (SVD).

29. A method as claimed in claim 24, 25, 26 or 27 wherein said compressing comprises non-negative matrix factorisation (NMF).

30. A method as claimed in claim 29 wherein said image data comprises an m x n image matrix **I**, where n is the number of rows and m is the number of columns of said display, and wherein said NMF determines a first m x p matrix **W** and a second p x n matrix **H** where p is less than or equal to the smallest of n x m, and where, $\mathbf{I} \approx \mathbf{W}.\mathbf{H}$.

31. A method as claimed in any one of claims 24 to 30 wherein said display comprises an organic light emitting diode display.

32. Processor control code to, when running, implement the method of any one of claims 24 to 31.

33. A carrier carrying the processor control code of claim 32.

34. A driver for an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the driver comprising:

an input to receive image data for display;

a system for formatting said image data into a plurality of subframes, each said subframe comprising data for driving a plurality of said row electrodes simultaneously with a plurality of said column electrodes; and

an output to output said subframe data for driving said row and column electrodes.

35. A driver for an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the driver comprising;

an input to receive image data for display, said image data defining an image matrix;

an output to provide data for driving said row and column electrodes of said display;

data memory to store said image data;

program memory storing processor implementable instructions; and

a processor coupled to said input, to said output, to said data memory and to said program memory to load and implement said instructions, said instructions comprising instructions for controlling the processor to:

input said image data;

factorise said image matrix into a product of at least first and second factor matrices said first factor matrix defining row drive signals for said display, said second factor matrix defining column drive signals for said display; and

output said row and column drive signals respectively defined by said first and second factor matrices.

36. A driver for an electro-optic display, the display having a plurality of pixels each addressable by a row electrode and a column electrode, the driver comprising;

an input to receive image data for display, said image data defining an image matrix;

an output to provide data for driving said row and column electrodes of said display;

data memory to store said image data;

program memory storing processor implementable instructions; and

a processor coupled to said input, to said output, to said data memory and to said program memory to load and implement said instructions, said instructions comprising instructions for controlling the processor to:

input said image data;

format said image data into a plurality of subframes, each said subframe comprising data for driving a plurality of said row electrodes simultaneously with a plurality of said column electrodes; and

output said subframe data for driving said row and column electrodes.